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A mixed methods research approach for the development and review of Competency Standards for dietitians.

Aim: Competency standards support a range of professional activities including the accreditation of university courses educating health professionals. Reviewing these standards is essential to ensure universities continue to produce well equipped graduates, who are able to meet the challenge of changing workforce requirements. This paper aims to review the significance of the Dietitians Association Australia's Competency Standards in defining emerging and contemporary dietetic practice and promotes the view that a mixed methods approach is robust and relevant.

Methods: A literature review of the methods used to develop Competency Standards for dietitians in Australia, including entry level, advanced level and Fellow competencies and other specific areas of competency, such as public health nutrition and nutrition education is outlined and compared to other allied health professions. The qualitative methodology used in the most recent review is described in more detail.

Results: The history of Competency Standards development and review in Australia is compared to dietetic Competency Standards internationally and within other health professions in Australia. The political context in which these standards have been developed in Australia and which has determined their format is also discussed. The results of the most recent CS review are reported.

Conclusion: The methodology used in this review provides rich data about contemporary dietetic practice and has relevance to competency standards development. The nexus between professional and academic standards will

require continued research and review of Competency Standards for dietitians in Australia. We recommend a planned process for review and promote a mixed methods approach.

Introduction

The Australian workforce continues to experience an increasing demand for health care workers at a rate that challenges those in the academic sector. The demand drivers include population growth, an ageing population, the changing nature of burden of disease and the greater focus on health prevention. Health Workforce Australia has predicted that without extensive reform the current system is unsustainable.¹ Parallel to this, the new Tertiary Education Qualification and Standards Agency (TEQSA) will soon establish standards of education for the university sector, independently of universities and aligned to professional standards.² It is therefore essential that professional bodies identify and define contemporary professional practice to remain at the leading edge of health practice and educational reform.

Competency Standards (CS) are the basis by which most professions in Australia define their practice and most have adopted an integrated model of competency, which includes attributes and performance factors³. Competency based standards were introduced to trades and professions, in the early 1990's, to enable maximum use of skills in the community, provide an equitable method of testing overseas trained professionals and provide a framework for mutual recognition processes. Federal government funding was made available to use a particular evidence based structure and methodology for CS.⁴ These ensured consistency in format, such as a key purpose for the profession, units or work roles, elements or specific

work tasks and performance criteria⁵. Dietetics was one of the first professions to complete this process and the methodology used was published as a case study for other professions.⁶

Internationally, dietetic CS underpin entry level, specialist and advanced practice in the USA⁷⁻⁸ and are widely accepted in English speaking countries.⁹⁻¹¹ In Australia, CS have been successfully used to achieve mutual recognition with Dietitians New Zealand; support the credentialing of dietitians via the Accredited Practising Dietitian (APD) program; accredit courses educating dietitians; underpin job descriptions; and to assess overseas dietitians, wishing to practice in Australia.¹² They have effectively facilitated the maintenance of standards for entry into the profession as the number of dietetic courses in Australia increased from seven in 1993 to over 20 courses in 2011.

While CS provide a useful framework, there is however a tension between constantly evolving professions and the minimum standard required for exit from an academic program. The competency standards literature indicates that competency is not static but evolves and develops and is highly dependent on workplace experience and culture.¹³ Those allied health professions which now are licensed to undertake non-medical prescribing have needed to revisit their entry level CS to investigate their applicability for treatment, which at the moment requires post entry additional training. The Optometry Association Australia developed universal and therapeutic CS in 2008, to meet the legislative requirements for therapeutic prescribing. They predict however, that as optometry entry level training now includes prescribing, these therapeutic competencies will be included within the entry level CS in the future¹⁴. The evolving nature of practice places enormous pressure on academic institutions to constantly review

1 courses to meet workforce requirements and yet maintain quality educational
2 outcomes.

3 The process of developing and reviewing CS is usually undertaken under the
4 auspices of the professional association, with input from experienced
5 professionals and academics. Many use qualitative methodology, such as focus
6 groups, Delphi methods and stakeholder consultation in their review. The only
7 professions to the authors' knowledge, who identify direct observation of practice
8 to inform CS, are the dietetic⁶ and nursing professions¹⁵.

9 The aim of this paper is to review the significance of the Dietitians Association
10 Australia (DAA)'s Competency Standards in defining emerging and
11 contemporary dietetic practice. It promotes the view that a mixed methods
12 approach is robust and relevant as part of a regular review process.

13 **Methods**

14 The methodological framework informing this viewpoint builds on a historical
15 context and literature review, as well as a detailed description of a mixed methods
16 approach.

17 Literature searches using search terms dietitian, dietician, dietetics, competence,
18 competency, health professional, entry level training, education were conducted
19 via the database EBSCO host, including Cinahl, Medline, Proquest and ERIC
20 from 1996 to 2011 to determine the historical context and methodologies used in
21 CS development. In addition to database searches, hand searching was conducted
22 of grey literature and government reports, using internet search engines Google
23 Scholar, Google Advanced and Yahoo.

24 The history of CS development in Australia is outlined, including the two DAA
25 initiated reviews of the CS for Entry Level Dietitians in 1998 and 2007-8, as well

as advanced level and specialist dietetic competencies. In Australia, qualitative methods for developing and reviewing specific dietetic competencies use purposive sampling methods of practitioners. Data is collected via individual interviews, focus groups and quantitative and Delphi surveys. CS are constructed or reconstructed using thematic, phenomenological and functional analysis and consultation of stakeholders and endorsement is conducted via questionnaires, workshops and interviews. Phenomenology is a range of psychological approaches concerned with subjective experience. It explores the essence of an individual's experience, gaining insight into personal motivations and actions. This method is powerful in gaining a perspective free from the bias of conventional wisdom and its assumptions because it is based on an individual's subjective account of their experience¹⁶. Functional analysis is a holistic approach to analyzing work. It concentrates on the performance of actual work roles and the integrative aspects of the work which tie these roles together⁵. The particular mixed methods approach for the review the entry level CS in 2007-8, combines new graduate interviews of core activities and critical incidents, thematic and functional analysis to construct units, elements and performance criteria and stakeholder consultation.

Results

The first edition of the DAA Competency Standards for Entry Level Dietitians was published in 1993.¹⁷ The evolution of the CS involved functional analysis by a group of academic dietitians from each State providing dietetic education at that time and the President of the DAA. The research process also included validation of the draft CS with critical incident interviews of 26 new graduates.⁶ The process

1 was overseen by a Steering Committee including representatives of Dept of
2 Employment Education and Training, DAA's Education and Accreditation
3 Committee, Registration Boards, unions and academic institutions. Consultation
4 occurred via all University course coordinators and DAA members from 1991-
5 1993, prior to the final publication.

6 A review of these CS was funded by DAA in 1998. The project team interviewed
7 a purposive sample of 24 new graduates, using a phenomenological perspective.¹⁸

8 The process was overseen by the Dietetic Standards and Accreditation Advisory
9 Committee (DSAAC) and stakeholders were consulted. The results demonstrated
10 that the original CS were robust and required only minor changes. New graduates
11 however did identify areas of increased emphasis in their practice, which included
12 a need for a stronger focus on communication skills, cultural competency and
13 business management. The CS were altered slightly to reflect this emphasis with
14 some extra elements and performance criteria added¹⁹.

15 A similar approach was taken to develop Advanced Level and Fellow CS. In
16 2004, Way and Voevodin were commissioned by the DAA Board to develop a
17 professional recognition program for credentialed Advanced Accredited Practising
18 Dietitians and Fellows, which included the development of CS and their
19 associated units, element and performance criteria.²⁰ The methodology chosen
20 included a literature review; consultation with senior members of the profession
21 and the DAA Board; interview of exceptional practitioners, known for the
22 advanced practice; and two workshops to develop and refine the CS for both
23 groups. The interviews were semi-structured, asking participants to identify core
24 activities undertaken on a typical day and outlining knowledge, skills and attitudes
25 required to conduct these activities well. The resultant CS and the process

required to apply for and meet these advanced credentials continues to be used with 6 Fellows and over 200 Advanced APDs recognised to date.

Specific competency areas in dietetics have also been analysed using a variety of qualitative approaches. Cant examined dietitians' and clients' perceptions of competence required for nutrition education of individuals and used results to validate over 40 performance criteria around proficient counselling skills.²¹ She confirmed the value of the entry level performance criteria for nutrition education and hence CS as a valid basis on which to build advanced CS.

In the early 2000's, Hughes used a socioecological analysis of the determinants for a Public Health Nutrition (PHN) work force.²² He recommended that this workforce required postgraduate qualifications in PHN to build on entry level dietetic competencies and developed a competency framework for PHN workforce development at an advanced level.

Later in 2010, Palermo evaluated the effectiveness of mentoring for novice PHNs by a more experienced PHN practitioner on workforce capacity.²³ The methodology included self assessment, both face-to face and electronic mentoring support, followed by in-depth interviews. Mentoring and peer support improved confidence and self-efficacy in the PHN role and the advanced level CS were relevant and appropriate for novice PHNs. Thus practice in PHN had evolved over 10 years to incorporate previously considered advanced practice into entry level.

Others have used open ended interviews to assess the appropriateness of food industry placement²⁴ and literature review to argue cooking skills have become a core competency.²⁵

In 2007-8, DAA successfully obtained funding from the Australian government, via its Mental Health in Tertiary Curricula program to review the CS for their

relevance to entry-level practice, with respect to mental health issues.²⁶ Although the funding was designed to identify gaps in mental health training, the first phase of the submission assessed the relevance of the CS in general and specifically in areas such as cultural competency, chronic disease self management, counselling, private practice, industry, research and food service.²⁷ The review of the CS was overseen by the DSAAC and the Mental Health Tertiary Curricula for Dietitians Project Steering Group. The sampling methodology is described elsewhere.²⁸

Nineteen new graduates six to eighteen months since graduation were interviewed about their daily work activities, using a 'Core Activities Interview' (Table 1). Interviews were taped, transcribed and analysed by the authors. Themes and underlying attributes, that is skills, knowledge and attitudes were identified to ensure all new themes were exhausted. The themes were then categorised and relationships between core activities were established. These themes and activities were compared to themes and activities in the 1998 CS review¹⁸ to identify similarities and differences, and new or emerging themes.

Core activities were elicited from the question "*What would you describe as your core activities? Or alternatively, could you describe a 'normal day'?*" Reported outcomes of performing core activities included improved client care, improved nutritional status of the client or community, increased satisfaction with the service, increased efficiency and improved business opportunities. Other outcomes identified included increased awareness of the dietitian's role, improved nutrition profile of the food supply and contribution to the evidence base for dietetics and professional satisfaction. A summary of the core activities and examples of these activities are shown in Table 2 where they are compared to the core activities from the 1998 CS review.¹⁸

The questions “*How would you describe doing this activity well?*” and “*What skills are necessary to perform this activity*” were used to identify the themes and thus attributes necessary to perform core activities. Attributes, underlying activities, were categorised into knowledge, skills and attitudes and are listed in Table 3, against the core activities.

Strong themes which were emerging in 1998¹⁸ became core themes in 2008. These included communication, management, advocacy and leadership. Communication activities included problem solving, using mediation to raise difficult issues with clients, colleagues and management, culturally appropriate communication and counselling, with a greater emphasis on empowerment, chronic disease self management and motivational interviewing skills. Management skills included strategic planning, basic financial management, developing business cases and marketing in all dietetic work contexts. As a result, a new unit of Management and major revisions to the units incorporating Communication and Advocacy and Leadership occurred. Newer contexts include private practice and isolated rural practice with a greater emphasis on preventative health and interdisciplinary care.

The themes and activities were incorporated into the first draft of the CS by grouping tasks into work role and thus units and elements of CS prior to endorsement by the Steering Group and DSAAC. Draft performance criteria were added to the revised units and elements and circulated to educators and other expert stakeholders. Consultation occurred over a 12 month period with stakeholders including all university course coordinators, competency experts, convenors of special interest groups and DAA members. Feedback informed a revision of the CS presented at DAA National Conference in 2008. The final

version of the CS, shown in Figure 1²⁹ was released at the 2009 DAA National Conference.

The Australian approach to identifying competencies by collecting practice information from individual practitioners in a systematic way is relatively unique to dietetics. Internationally, the American Dietetic Association has used surveys of members and consensus approach using expert committees such as the Quality Management Committee to review Standards of Practice for Registered Dietitians in Nutrition Care³⁰. In 2008, Dietitians Canada developed a framework for advanced practice in dietetics using a Delphi process. The researchers state the framework was influenced by the DAA professional recognition process³¹.

Outside the profession of dietetics, nursing has used thematic analysis of focus groups and interviews of experienced nurses to identify characteristics of competent nursing in extended practice.³² A recent review of CS for Australian occupational therapists used a survey of stakeholders, stakeholder focus groups and literature review and produced CS which reflect the minimum level required for registration of a graduate.³³ Other health professions which have reported their methods, such as optometry¹⁴ and podiatry³⁴, use similar processes but none apart from nursing, collect data directly from practitioners about their core activities and their underlying attributes.

Discussion

The process used in the latest review of the entry level CS provides rich insight into contemporary practice of dietetics in Australia and defines the activities and attributes required to function as a competent dietitian in the 21st century.

1 Interestingly, the work on specific areas of competency such as on nutrition
2 education²¹, on PHN²²⁻²³ and on industry contexts²⁴, support the view that entry
3 level dietetics is dynamic, absorbing areas previously thought to be advanced.

4 The CS are derived from interviews with new graduates, six to eighteen months
5 from graduation, but are used to inform university curricula. Competency is
6 described as a continuum for lifelong learning, whereby practitioners progress
7 from novice, advanced beginner, competent, proficient and expert³⁵. There is
8 much debate however about how to define the cut points between each stage. Is a
9 novice one entering practice placement prior to graduation or a new graduate
10 beginning the provisional APD process? Competence is described as the point
11 where a learner has acquired enough understanding, skill and appropriate values
12 to continue professional development independently, at the end of supervised
13 practice³⁵ and entry level competency requires identity and contextualisation
14 which can only occur in the workforce.^{13, 36} Australian occupational therapists
15 argue that competencies should describe what is required for registration on
16 graduation³³. This may have advantages in aligning professional standards with
17 graduate learning outcomes, as recommended by TEQSA², however minimum
18 standards may limit scope of practice as it evolves, as optometrists suggest¹⁴.
19 Minimum standards may also be at odds with the Health Workforce Australia
20 agenda to reorient the workforce to address emergent burden of disease in an
21 ageing population; an agenda which suggests innovation and renewal¹.

22 CS are used by DAA to inform the accreditation process of university courses and
23 as a result competency based assessment has become standard practice in those
24 courses. CS form the basis of the DAA Manual for Accreditation³⁷, which
25 includes other detailed documents, related to the CS, including core curriculum

1 content requirements and range variables to define the scope of practice and
2 assessment to be undertaken prior to graduation. There is debate however about
3 whether the CS are minimum for entry to the profession on graduation or whether
4 they define competency in the first year of practice where workplace exposure
5 consolidates competence. Some educators argue that it is difficult to meet many
6 performance criteria related to professional activities pre-graduation, however
7 others have demonstrated this is possible using a self assessment and portfolio
8 approach³⁸.

9 DAA uses the APD credential in lieu of registration, with the philosophy that the
10 provisional first year allows consolidation of skills and professional identity via
11 the mentoring program, however there has not been good integration between the
12 university course accreditation process and the requirements for the provisional
13 APD program.

14 Our view is that the methodology we have described for CS development and
15 review in Australia is robust and rigorous. CS verification however needs to be
16 built into practice. Given the dynamic nature of practice and the potential for entry
17 level scope of practice to expand into areas previously thought of as advanced,
18 regular reviews of the CS need to be undertaken. While DAA has provided
19 internal funding for CS review, the approach has been rather haphazard. Major
20 entry level CS reviews have occurred due to government funding windfalls rather
21 than from a planned process. The advanced level and fellow CS have not been
22 reviewed at all. Given the fluid nature of entry level, advanced and expert
23 competency, there is urgent need for regular review of all CS. We argue that that a
24 minimum standards approach has major limitations but that a mixed methods
25 approach has rigour and relevance nationally and internationally. It remains a

challenge for the Australian dietetic profession to continue this leadership role, mindful of the political and education agenda around learning outcomes and health workforce development.

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